

REMARKS

The amendment to claim 1 incorporates the limitations of original claim 7 which has now been canceled. Claims 8 and 14 have been amended to correct their dependency. Applicants submit that the amendments do not add any new matter to the disclosure. The amendment does not raise any new issues in as much as claim 1 is now identical to previous claim 7. The amendment narrows the issues for appeal. Applicants respectfully request that the amendment be entered.

The invention centers on methods of locally altering a feature of an existing pattern on an integrated circuit substrate. The invention achieves this result with minimal side reaction by use of a combination of local chemical delivery with activation energy provided by illumination. This combination enables precise alteration without adverse impact on the remaining portions of the pattern.

Applicants submit that the rejections of based on the combination of Sakakibara et al. (US Pat. 5397420) in view of Scott (US Pat. 6407001) alone or in combination with Izadpanah et al. (US Pat. 6735398) and the rejections based on the combination of Goodman et al. (US Pat. 6316153) in view of Scott (US Pat. 6407001) and Mirkin (US Pat. App. 2002/0063212) are moot in view of the incorporation of claim 7 into claim 1 in as much as claim 7 was not rejected over those combinations.

Goodman et al. (US Pat. 6316153) discloses a fabrication process using a photopolymerizable precursor and a probe tip photon source whereby a polymer structure is created on a substrate. Goodman et al. does not disclose or suggest

the alteration of an existing pattern on an integrated circuit substrate.

Scott (US 6407001) discloses use of a focused ion beam (FIB) and an interactive species (e.g., an oxygen source or xenon fluoride) to etch copper.

Applicants submit that the combination of Goodman et al. with Scott would not result in or suggest the claimed invention. Specifically, the use of a FIB would not be conducive to the desired objective of Goodman et al. (to create polymer structures). The use of a photon source as described by Goodman et al. would not be useful to achieve the objective of Scott (to etch copper). Applicants note that photons would produce virtually no mechanical force compared to a focused ion beam. Further, the interactive species of Scott are all present as gaseous inorganic molecules whereas Goodman contemplates organic precursors which appear to be in solid or liquid form. On this basis, applicants submit that it is not apparent from the combined teaching of the references which aspects to combine to achieve the presently claimed invention.

Martin et al. (IBM Research Report, RC21891) discloses illumination of a probe tip to create photon scattering. Martin et al. does not disclose or suggest the alteration of an existing pattern on an integrated circuit substrate using illumination of a probe tip to create photon scattering.

Applicants submit that the combination of Martin et al. with Goodman et al. and Scott would still result a situation that the combination of references provides no (or inadequate) guidance to one of ordinary skill in the art as to which aspects to combine to achieve the presently claimed invention. Specifically, Martin et al. does not indicate that the FIB of Scott would be useful in the process of Goodman et al., nor that the photon-based energy of Goodman et al. or Martin et al. would be suitable to achieve the objective of Scott

(alteration of an existing pattern on an integrated circuit substrate).

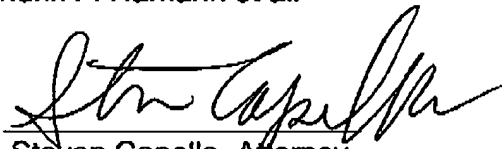
Thus, applicants submit that the combinations of references that are the basis for the rejections of the present claims do not render the present claims obvious since the combinations of references provides no (or inadequate) guidance to one of ordinary skill in the art as to which aspects to combine to achieve the presently claimed invention.

For the above reasons, applicants submit that the claims are patentable and that the application is in condition for allowance. Such allowance is earnestly and respectfully solicited.

Respectfully submitted,

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